



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION  
11805 SW 26 Street, Room 208  
Miami, Florida 33175-2474  
T (786) 315-2590 F (786) 315-2599

[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

## NOTICE OF ACCEPTANCE (NOA)

High Velocity Hurricane Protection Systems, Inc.  
3827 Progress Avenue  
Naples, Florida 34104-3647

### SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

### DESCRIPTION: "Category 5" Aluminum Accordion Shutter

**APPROVAL DOCUMENT:** Drawing No. 14-2100, titled "Category 5 Accordion Shutter System", sheets 1 through 5 of 5, prepared by Engineering Express, dated February 26, 2010, last revision dated March 17, 2015, signed and sealed by Frank L. Bennardo, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section.

### MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, the following statement: "Miami-Dade County Product Control Approved", and NOA number, per TAS-201, TAS-202, and TAS-203, unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises & renews NOA # 12-0523.15 and consists of this page 1, evidence submitted pages E-1, E-2, & E-3 as well as approval document mentioned above.

The submitted documentation was reviewed by Helmy A. Makar, P.E., M.S.



*Helmy A. Makar*  
07/16/2015

NOA No. 15-0323.03  
Expiration Date: 04/14/2016  
Approval Date: 07/16/2015

**High Velocity Hurricane Protection Systems, Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #04-1220.03**

**A. DRAWINGS**

1. *Drawing No. 04-04, titled "Category 5 Accordion Shutter System", sheets 1 through 4 of 4, prepared by Al-Farooq Corporation, dated February 28, 2004, last revision #A dated January 25, 2005, signed and sealed by Humayoun Farooq, P.E.*

**B. TESTS**

1. *Test report on Large Missile Impact Test and Cyclic Wind Pressure Test of Category 5 Accordion Shutter System, prepared by Hurricane Engineering & Testing, Inc., Report No. HETI-03-1842, dated August 18, 2003, signed and sealed by Rafael E. Droz-Seda, P.E.*
2. *Test report on Uniform Static Air Pressure Test of Category 5 Accordion Shutter System, prepared by Hurricane Engineering & Testing, Inc., Report No. HETI-03-1843, dated August 18, 2003, signed and sealed by Rafael E. Droz-Seda, P.E.*

**C. CALCULATIONS**

1. *Anchor analysis dated March 23, 2004, Sheets A-1 through A-12 & AP-1 through AP-16, prepared by Al-Farooq Corporation, signed and sealed by Humayoun Farooq, P.E.*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Building Code Compliance Office.*

**E. MATERIAL CERTIFICATIONS**

1. *Certified Tensile Test Report from Hurricane Engineering & Testing Inc., Report No. HETI-03-T052, dated September 03, 2003, for aluminum accordion sample.*

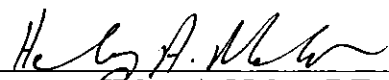
**F. STATEMENTS**

1. *Statement letter of conformance by Al-Farooq Corporation, dated October 26, 2004, signed and sealed by Humayoun Farooq, P.E.*

**2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 10-0316.02**

**A. DRAWINGS**

1. *Drawing No. 10-HVH-0001, titled "Category 5 Accordion Shutter System", sheets 1 through 5 of 5, prepared by Engineering Express, dated February 26, 2010, last revision dated April 30, 2010, signed and sealed by Frank L. Bennardo, P.E.*



**Helmy A. Makar, P.E., M.S.**  
**Product Control Unit Supervisor**  
**NOA No. 15-0323.03**  
**Expiration Date: 04/14/2016**  
**Approval Date: 07/16/2015**

**High Velocity Hurricane Protection Systems, Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

1. *Anchor analysis dated March 07, 2010, Sheets 1 through 32 of 32, prepared by Engineering Express, signed and sealed by Frank L. Bennardo, P.E.*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Building Code Compliance Office.*

**E. MATERIAL CERTIFICATIONS**

1. *None.*

**F. STATEMENTS**

1. *Statement letter of conformance by Engineering Express, dated March 11, 2010, signed and sealed by Frank L. Bennardo, P.E.*

**3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 12-0523.15**

**A. DRAWINGS**

1. *Drawing No. 10-HVH-0001, titled "Category 5 Accordion Shutter System", sheets 1 through 5 of 5, prepared by Engineering Express, dated February 26, 2010, last revision dated January 15, 2012, signed and sealed by Frank L. Bennardo, P.E.*

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. QUALITY ASSURANCE**

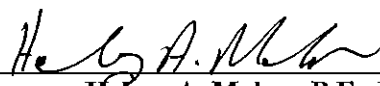
1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

**E. MATERIAL CERTIFICATIONS**

1. *None.*

**F. STATEMENTS**

1. *Statement letter of compliance with FBC 2010 by Engineering Express, dated May 18, 2012, signed and sealed by Frank L. Bennardo, P.E.*



Helmy A. Makar, P.E., M.S.  
Product Control Unit Supervisor  
NOA No. 15-0323.03  
Expiration Date: 04/14/2016  
Approval Date: 07/16/2015

**High Velocity Hurricane Protection Systems, Inc.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**4. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. *Drawing No. 14-2100, titled "Category 5 Accordion Shutter System", sheets 1 through 5 of 5, prepared by Engineering Express, dated February 26, 2010, last revision dated March 17, 2015, signed and sealed by Frank L. Bennardo, P.E.*

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. QUALITY ASSURANCE**

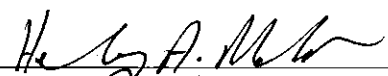
1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

**E. MATERIAL CERTIFICATIONS**

1. *None.*

**F. STATEMENTS**

1. *Statement letter of compliance with FBC 2014 by Engineering Express, dated March 19, 2015, signed and sealed by Frank L. Bennardo, P.E.*



**Helmy A. Makar, P.E., M.S.**

**Product Control Unit Supervisor**

**NOA No. 15-0323.03**

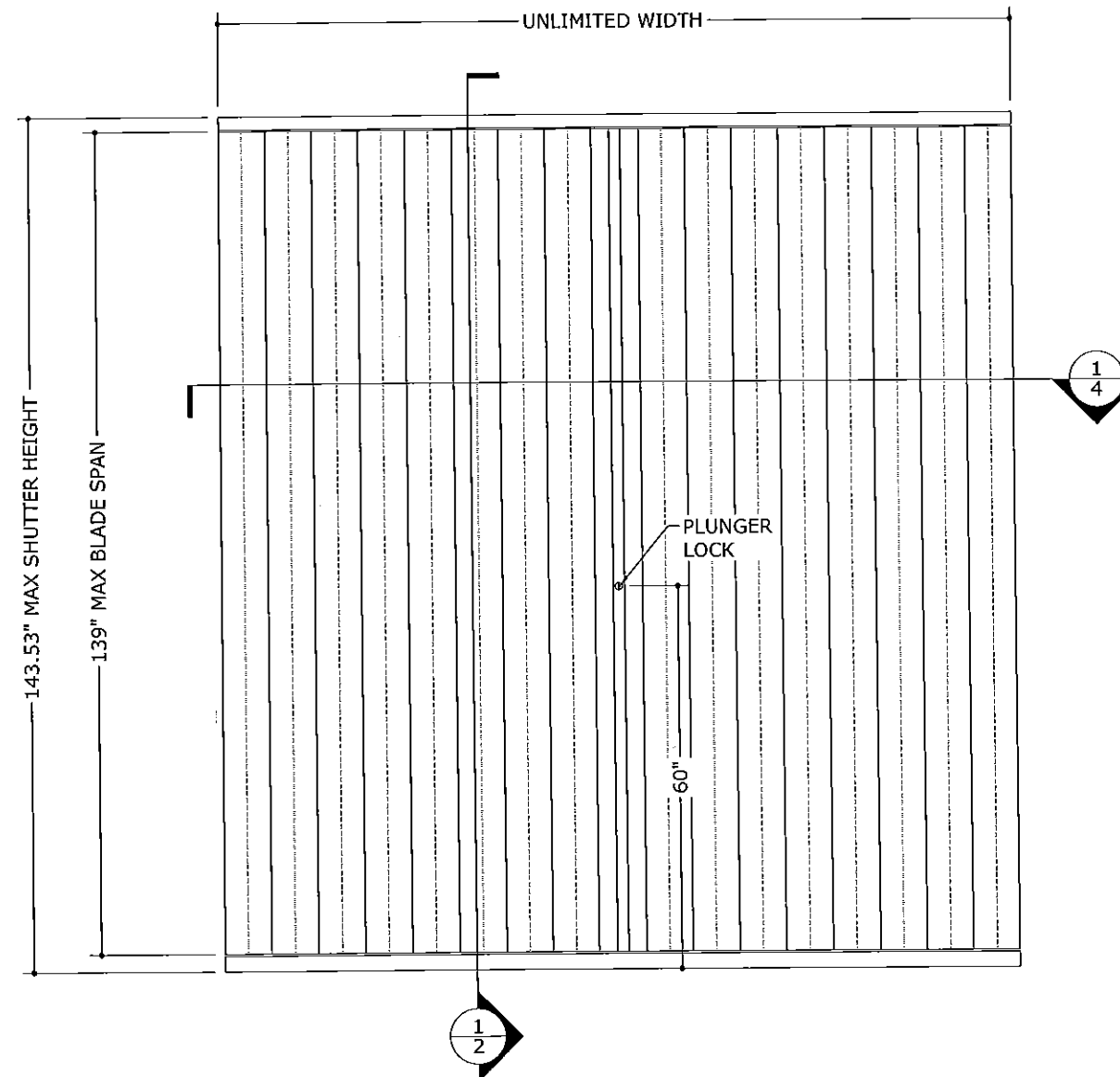
**Expiration Date: 04/14/2016**

**Approval Date: 07/16/2015**

# CATEGORY 5™ ACCORDION SHUTTER SYSTEM

## GENERAL NOTES

1. THE SYSTEM DESCRIBED HEREIN HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE FIFTH EDITION (2014), FOR USE WITHIN THE HIGH VELOCITY HURRICANE ZONE, PER TAS 201, TAS 202 AND TAS 203 TEST STANDARDS.
2. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR  $C_d=1.6$  HAS BEEN USED FOR WOOD ANCHOR DESIGN.
3. POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE.
4. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
5. PERMIT HOLDER SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS. WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.
6. ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, UNLESS NOTED OTHERWISE.
7. PRODUCT MARKINGS SHALL BE PLACED ON THE OUTSIDE OF THE SHUTTER AT THE BOTTOM OF THE CENTERMATE, AND SHALL BE PERMANENTLY LABELED WITH THE FOLLOWING MINIMUM INFORMATION:
  - HIGH VELOCITY HURRICANE PROTECTION SYSTEMS
  - NAPLES, FLORIDA
  - TAS 201, 202 & 203
  - MIAMI-DADE COUNTY PRODUCT APPROVED
8. ALL BOLTS & WASHERS SHALL BE ZINC COATED STEEL, GALVANIZED STEEL, OR STAINLESS STEEL WITH A MINIMUM TENSILE YIELD STRENGTH OF 60 KSI UNLESS NOTED OTHERWISE HEREIN. ALL 3/16"Ø OR 1/4"Ø POP RIVETS SHALL BE 5056-H32 ALUMINUM ALLOY OR STRONGER.
9. ALL STEEL IN CONTACT WITH ALUMINUM SHALL BE PAINTED OR PLATED.



ALLOWABLE  
DESIGN PRESSURES

+140 PSF  
-140 PSF

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 15-0323.03  
Expiration Date 04/14/2016

By *[Signature]*  
Miami Dade Product Control

FRANK L. BENNARDO  
P.E.  
LICENSE  
03/20/2015  
No. 48549

ENGINEERING  
EXPRESS  
STATE OF  
FLORIDA  
160 SW 12th Avenue, Suite 340  
Deerfield Beach, FL 33442  
Ph: (954) 354-0660 Fax: (954) 354-0443  
WWW.ENGEXP.COM  
CERT. OF AUTH. #8885  
A. FRANK L. BENNARDO, P.E., INC. INNOVATION

HIGH VELOCITY  
HURRICANE PROTECTION SYSTEMS  
3827 PROGRESS AVENUE  
NAPLES, FL 34104

CATEGORY 5™ ACCORDION SHUTTER SYSTEM  
MIAMI-DADE NOTICE OF ACCEPTANCE

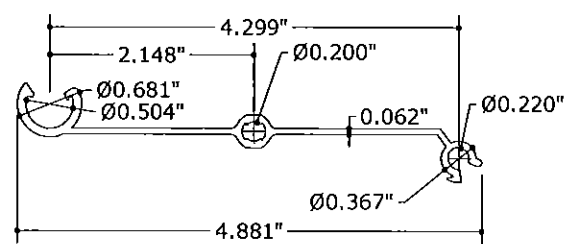
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|---------------------------|------|------|----------|
| INIT ISSUE                | KL   | FLB  | 02/26/10 |
| REV. PER BCCO COMMENT     | KL   | FLB  | 04/30/10 |
| 2010 FBC (10-HVH-0001.02) | KL   | FLB  | 01/15/12 |
| FBC 5TH EDITION           | CSL  | TSB  | 03/17/15 |

14-2100

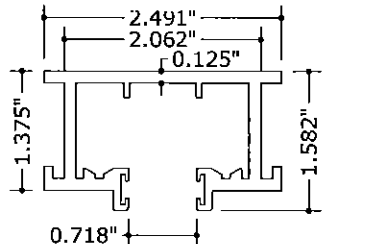
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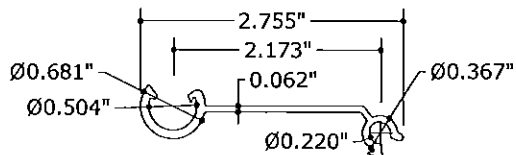
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03/20/2015 - 10:29am chen



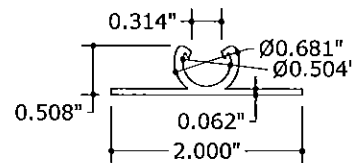
1 SLAT  
6" = 1'-0" 6063-T6



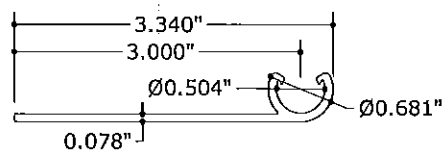
2 TOP TRACK  
6" = 1'-0" 6063-T6



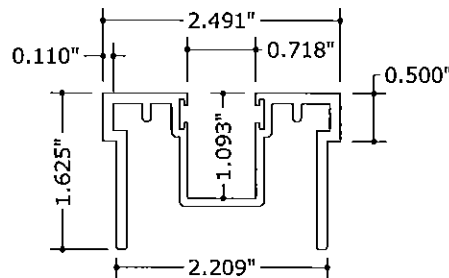
3 STARTER BLADE  
6" = 1'-0" 6063-T6



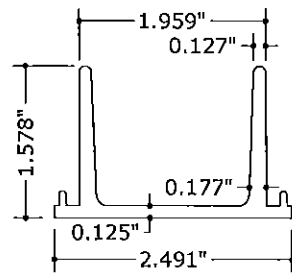
4 END BASE  
6" = 1'-0" 6063-T6



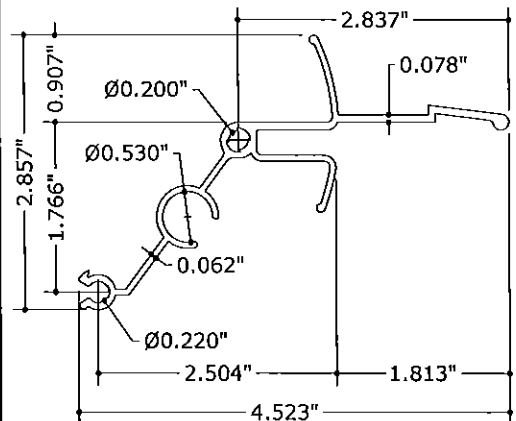
5 ALT. END BASE  
6" = 1'-0" 6063-T6



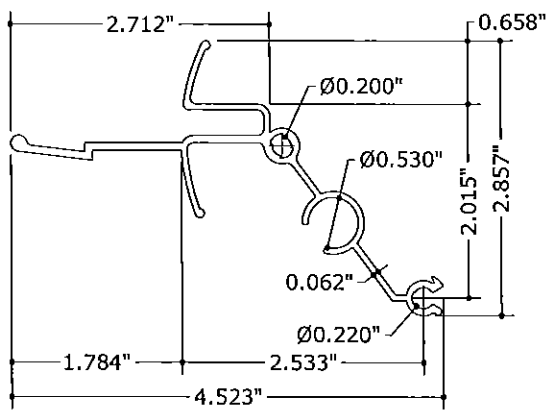
6 FLOOR TRACK  
6" = 1'-0" 6063-T6



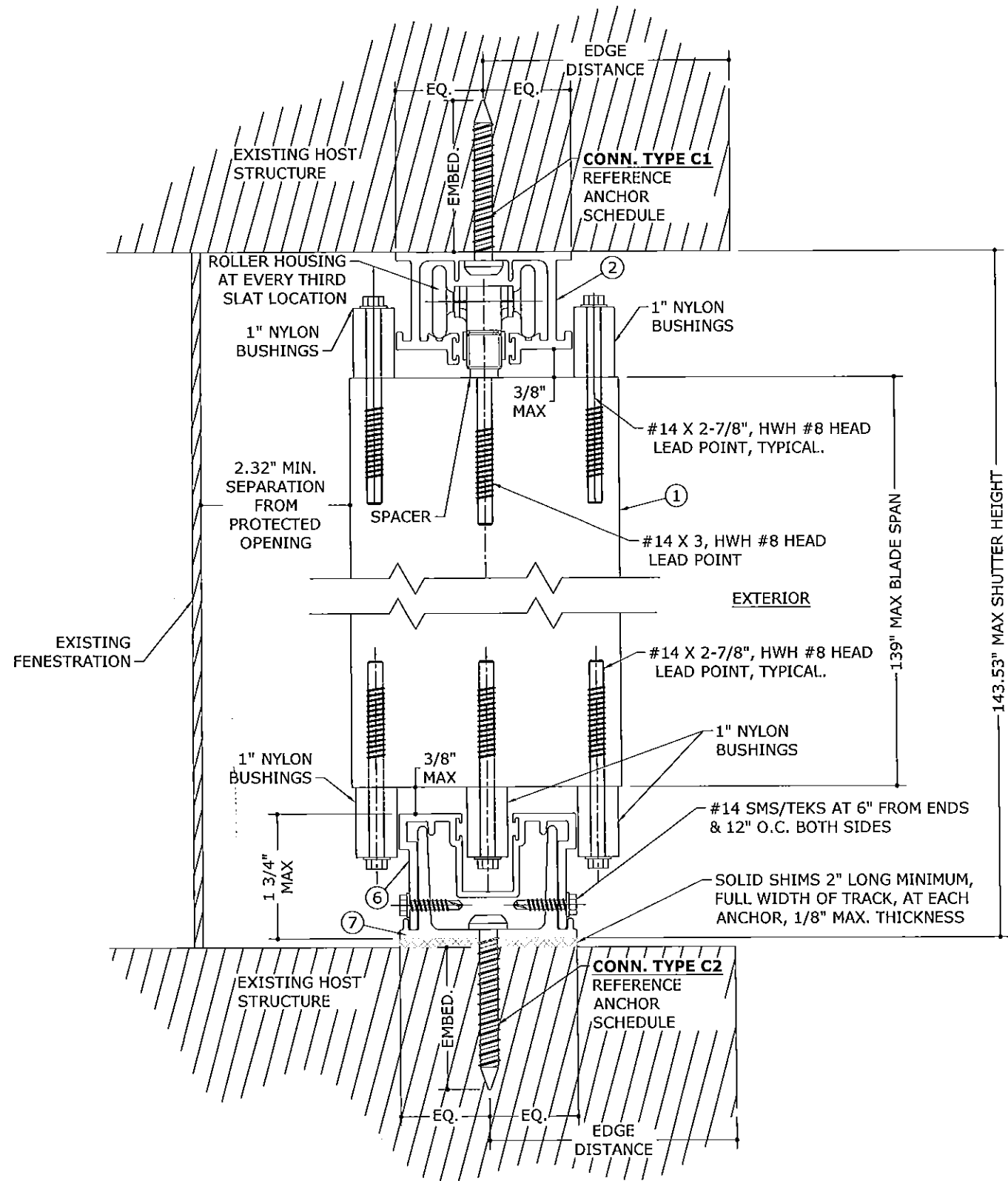
7 EXPANSION BASE  
6" = 1'-0" 6063-T6



8 LEFT CENTER MATE  
6" = 1'-0" 6063-T6

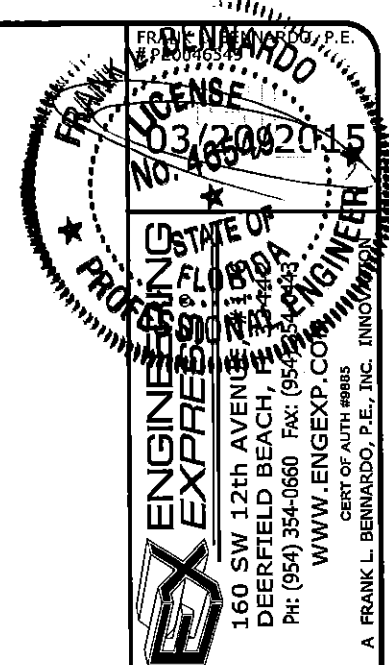


9 RIGHT CENTER MATE  
6" = 1'-0" 6063-T6



1 TYPICAL VERTICAL SECTION  
2 N.T.S. VERT. SECTION

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 15-0323.03  
Expiration Date 04/14/2016  
By *He G.A. M*  
Miami Dade Product Control



HIGH VELOCITY  
HURRICANE PROTECTION SYSTEMS  
3827 PROGRESS AVENUE  
NAPLES, FL 34104



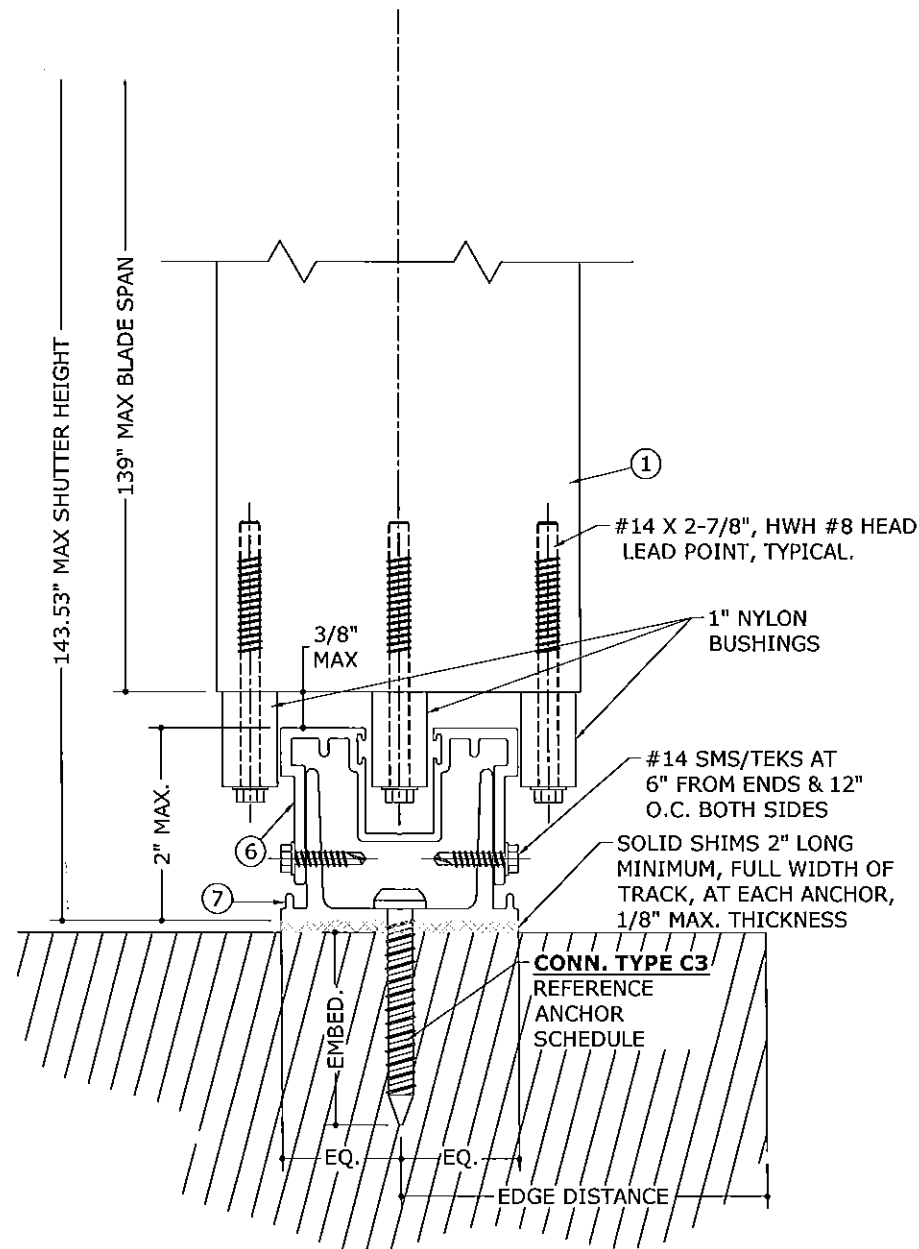
CATEGORY 5<sup>TH</sup> ACCORDION SHUTTER SYSTEM  
MIAMI-DADE NOTICE OF ACCEPTANCE

| REMARKS                   | DRWN | CHKD | DATE     |
|---------------------------|------|------|----------|
| INT ISSUE                 | KL   | FLB  | 02/26/10 |
| REV. PER BCCO COMMENT     | KL   | FLB  | 04/30/10 |
| 2010 FBC (10-HVH-0001.02) | KL   | FLB  | 01/15/12 |
| FBC 5TH EDITION           | CSL  | TSS  | 03/17/15 |

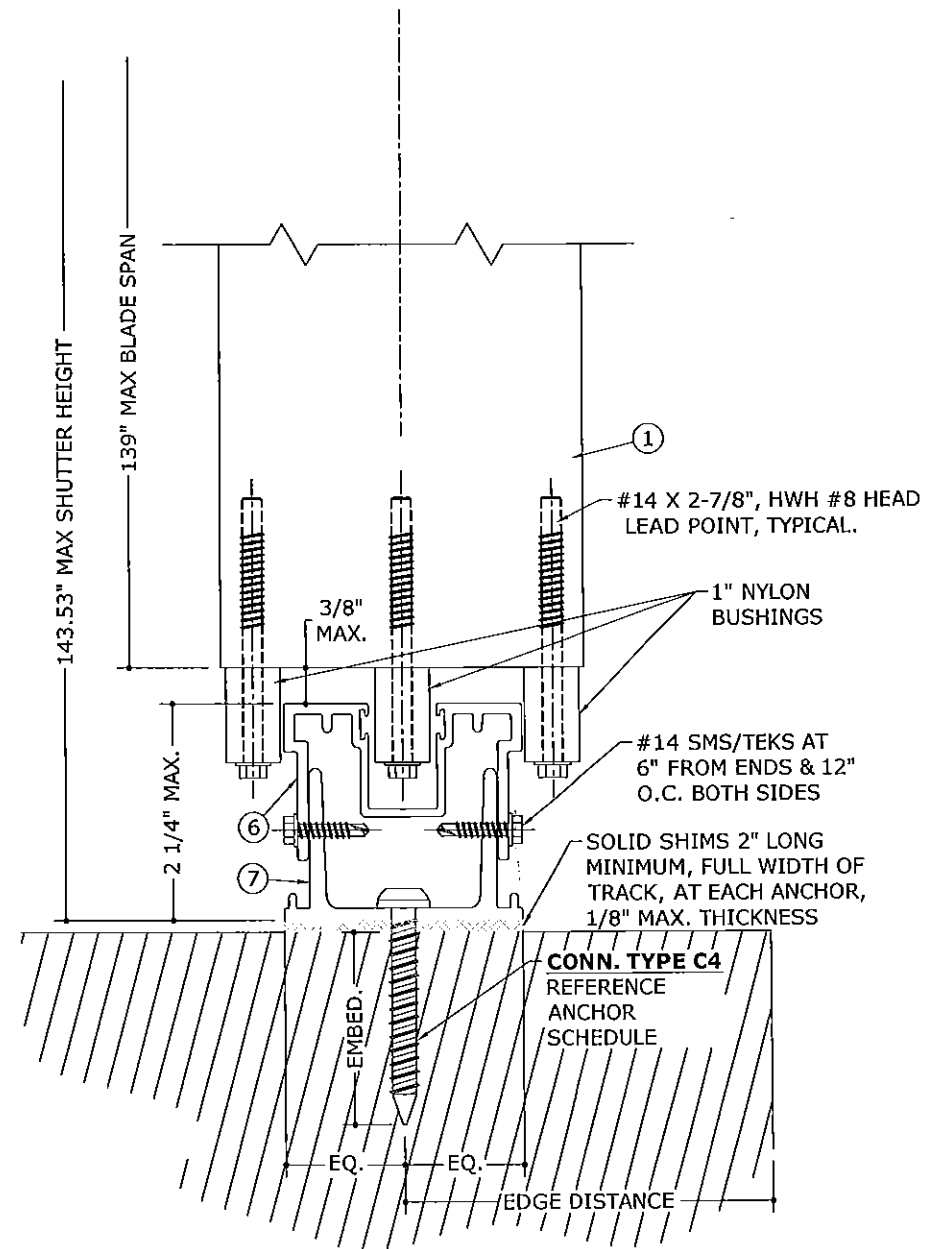
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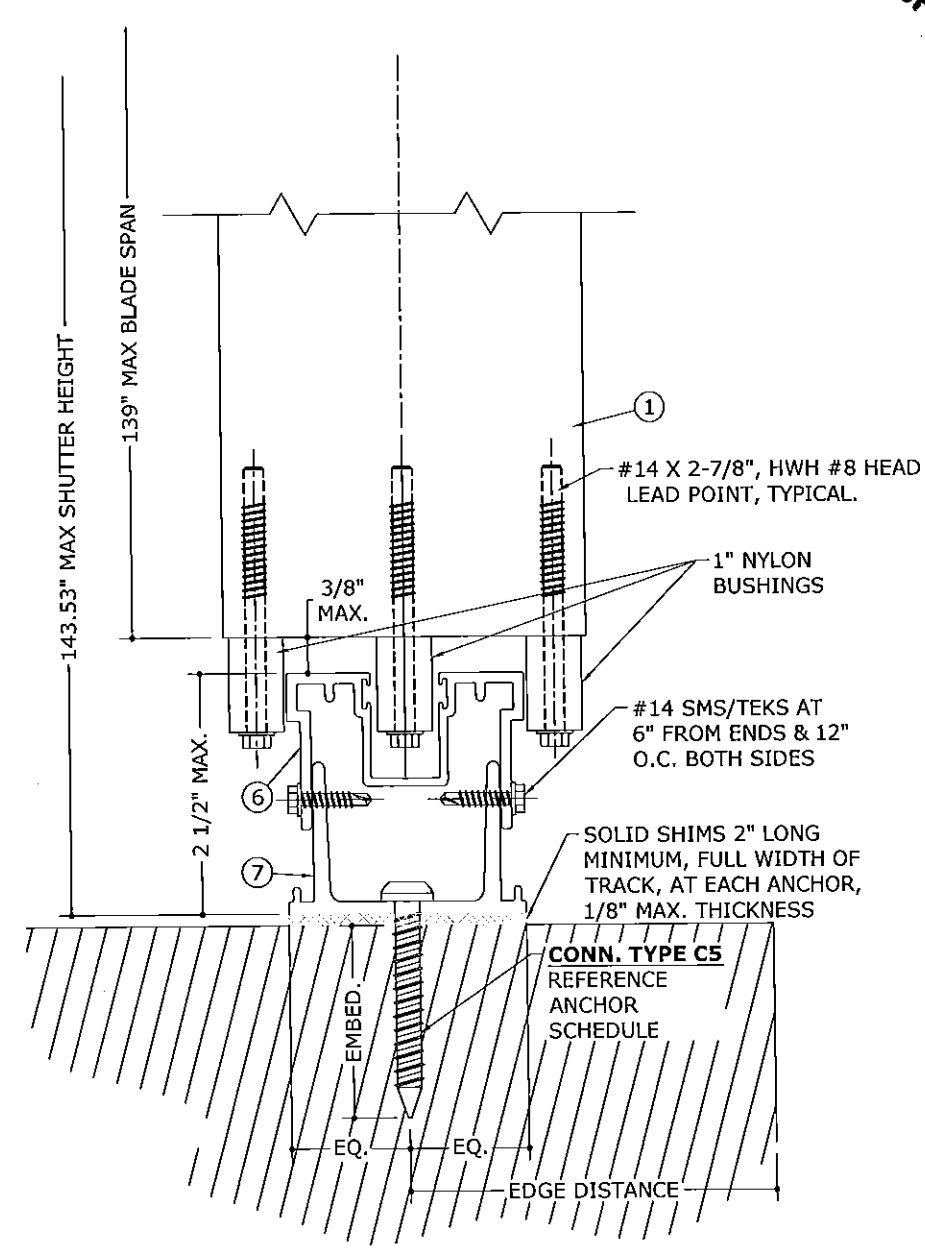
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1 ALT. BOTTOM MOUNT  
3 N.T.S. VERT. SECTION

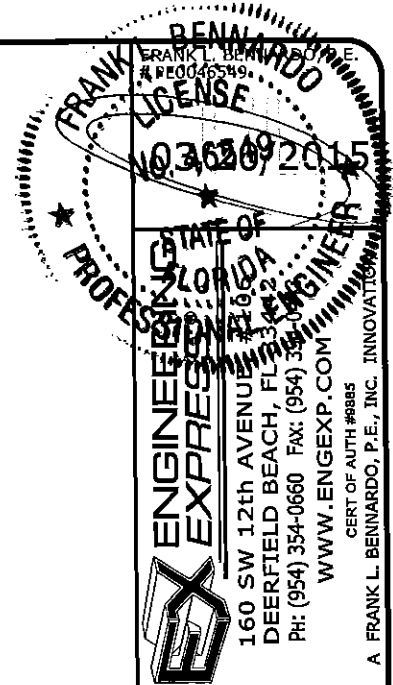


2 ALT. BOTTOM MOUNT  
3 N.T.S. VERT. SECTION



3 ALT. BOTTOM MOUNT  
3 N.T.S. VERT. SECTION

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 15-0323.03  
Expiration Date 04/14/2016  
By *[Signature]*  
Miami Dade Product Control



HIGH VELOCITY  
HURRICANE PROTECTION SYSTEMS  
3827 PROGRESS AVENUE  
NAPLES, FL 34104

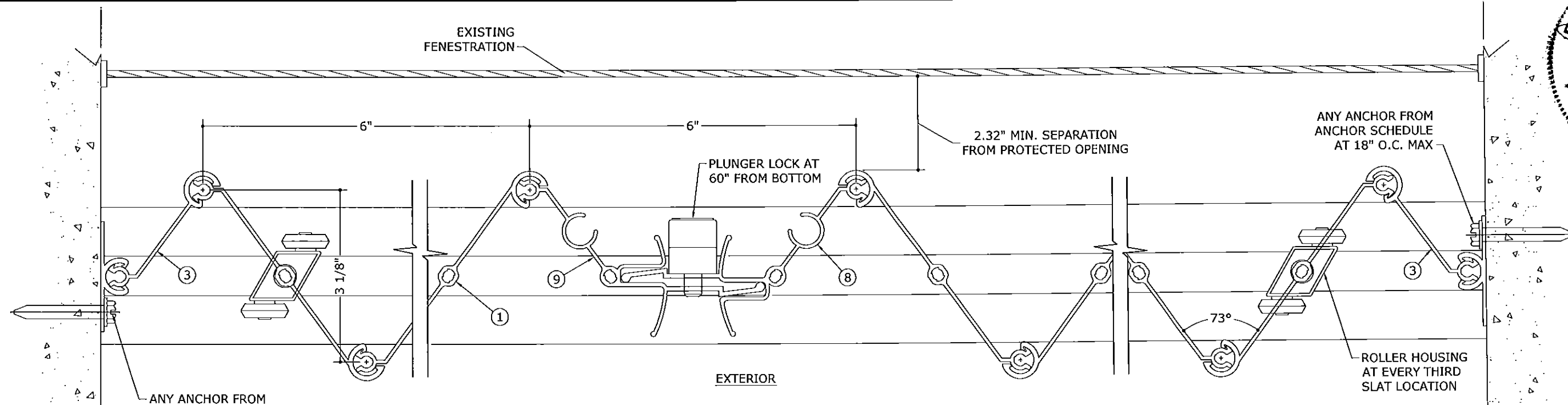


| REMARKS                    | DRWN | CHKD | DATE     |
|----------------------------|------|------|----------|
| INIT ISSUE                 | KL   | FLB  | 02/26/10 |
| REV. PER BCCO COMMENT      | KL   | FLB  | 04/30/10 |
| 2010 FBC (10-HVH-0001, 02) | KL   | FLB  | 01/15/12 |
| FBC 5TH EDITION            | CSL  | TSB  | 03/17/15 |

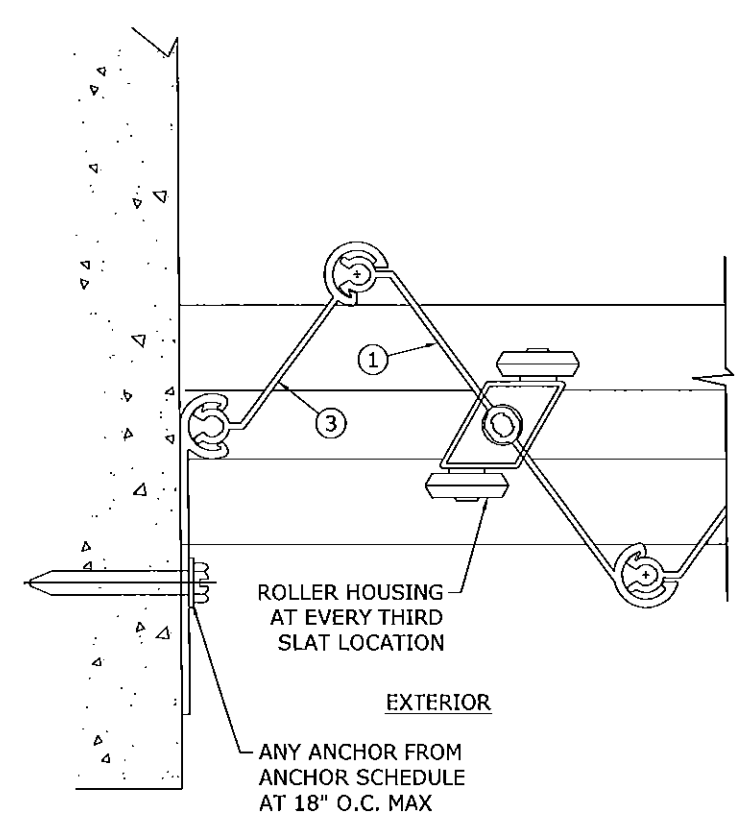
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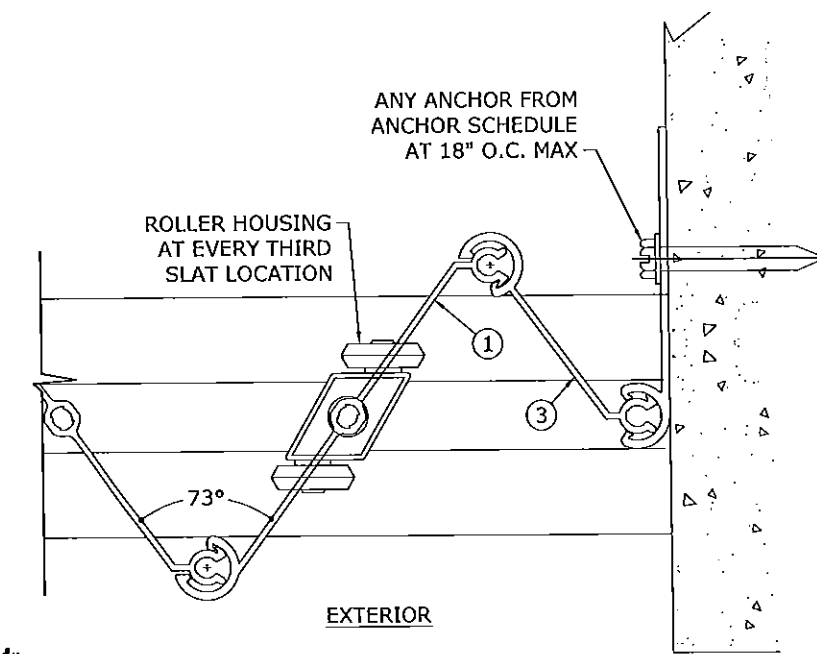
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03/20/2015 - 10:29am cten



1  
4  
TYPICAL HORIZONTAL SECTION  
N.T.S. HORIZ. SECTION



2  
4  
ALT. END BASE ATTACHMENT  
N.T.S. HORIZ. SECTION



3  
4  
ALT. END BASE ATTACHMENT  
N.T.S. HORIZ. SECTION

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 15-0323.03  
Expiration Date 04/14/2016  
By *[Signature]*  
Miami Dade Product Control

FRANK L. BENNARD, P.E.  
No. 46549  
03/20/2015  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
ENGINEERING EXPRESS, INC.  
160 SW 12th AVENUE, #1406  
DEERFIELD BEACH, FL 33442  
Ph: (954) 354-0660 FAX: (954) 354-0661  
WWW.ENGEXP.COM  
CERT. OF AUTH. #9885  
A. FRANK L. BENNARD, P.E., INC. INNOVATION

HIGH VELOCITY  
HURRICANE PROTECTION SYSTEMS  
3827 PROGRESS AVENUE  
NAPLES, FL 34104  
CATEGORY 5<sup>TH</sup> ACCORDION SHUTTER SYSTEM  
MIAMI-DADE NOTICE OF ACCEPTANCE

| REMARKS                   | DRWN | CHKD | DATE     |
|---------------------------|------|------|----------|
| INIT ISSUE                | KL   | FLB  | 02/26/10 |
| REV. PER ECCO COMMENT     | KL   | FLB  | 04/30/10 |
| 2010 FBC (10-HVH-0001.D2) | KL   | FLB  | 01/15/12 |
| FBC 5TH EDITION           | CSL  | TSB  | 03/17/15 |

14-2100  
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4



# ANCHOR SCHEDULE:

| HOST STRUCT. | ANCHOR  | LOAD (psf) | SEE ANCHOR TYPE FOR EDGE DISTANCES |      |      |      |      |                     |      |      |      |      |
|--------------|---|------------|------------------------------------|------|------|------|------|---------------------|------|------|------|------|
|              |   |            | Spans Up To 120"                   |      |      |      |      | Spans Up To 143.53" |      |      |      |      |
|              |   |            | CONN TYPE                          |      |      |      |      | CONN TYPE           |      |      |      |      |
|              |   |            | C1                                 | C2   | C3   | C4   | C5   | C1                  | C2   | C3   | C4   | C5   |
| CONCRETE     | 5/16" ITW TAPCON XL WITH 2-1/4" EMBED AND 1-9/16" EDGE DISTANCE (2899psi MIN CONC)    | 60         | 6.0"                               | 6.0" | 6.0" | 6.0" | 6.0" | 6.0"                | 6.0" | 6.0" | 6.0" | 6.0" |
|              |   | 80         | 6.0"                               | 6.0" | 6.0" | 6.0" | 6.0" | 6.0"                | 6.0" | 6.0" | 6.0" | 6.0" |
|              |   | 100        | 6.0"                               | 6.0" | 6.0" | 6.0" | 5.8" | 5.7"                | 5.6" | 5.3" | 5.0" | 4.8" |
|              |   | 120        | 5.7"                               | 5.5" | 5.3" | 5.0" | 4.7" | 4.7"                | 4.6" | 4.4" | 4.1" | 3.9" |
|              |   | 140        | 4.9"                               | 4.7" | 4.5" | 4.2" | 4.0" | 4.1"                | 3.9" |      |      |      |
|              | 5/16" ITW TAPCON XL WITH 2-1/4" EMBED AND 2-3/16" EDGE DISTANCE (2899psi MIN CONC)    | 60         | 6.0"                               | 6.0" | 6.0" | 6.0" | 6.0" | 6.0"                | 6.0" | 6.0" | 6.0" | 6.0" |
|              |   | 80         | 6.0"                               | 6.0" | 6.0" | 6.0" | 6.0" | 6.0"                | 6.0" | 6.0" | 6.0" | 6.0" |
|              |   | 100        | 6.0"                               | 6.0" | 6.0" | 6.0" | 6.0" | 6.0"                | 6.0" | 6.0" | 6.0" | 6.0" |
|              |   | 120        | 6.0"                               | 6.0" | 6.0" | 6.0" | 6.0" | 6.0"                | 6.0" | 5.6" | 5.3" | 4.9" |
|              |   | 140        | 6.0"                               | 6.0" | 5.8" | 5.4" | 5.1" | 5.5"                | 5.1" | 4.8" | 4.5" | 4.2" |
|              | 5/16" ITW TAPCON XL WITH 2-1/4" EMBED AND 3-1/8" EDGE DISTANCE (2899psi MIN CONC)     | 60         | 6.0"                               | 6.0" | 6.0" | 6.0" | 6.0" | 6.0"                | 6.0" | 6.0" | 6.0" | 6.0" |
|              |   | 80         | 6.0"                               | 6.0" | 6.0" | 6.0" | 6.0" | 6.0"                | 6.0" | 6.0" | 6.0" | 6.0" |
|              |   | 100        | 6.0"                               | 6.0" | 6.0" | 6.0" | 6.0" | 6.0"                | 6.0" | 6.0" | 6.0" | 6.0" |
|              |   | 120        | 6.0"                               | 6.0" | 6.0" | 6.0" | 6.0" | 6.0"                | 6.0" | 5.6" | 5.3" | 5.0" |
|              |   | 140        | 6.0"                               | 6.0" | 5.8" | 5.4" | 5.1" | 5.7"                | 5.1" | 4.8" | 4.5" | 4.2" |
|              | 1/4-20 POWERS CALK-IN WITH 7/8" MIN EMBED AND 2" EDGE DISTANCE (3000psi MIN CONC)     | 60         | 4.9"                               | 4.9" | 4.8" | 4.7" | 4.6" | 4.1"                | 4.1" | 4.0" | 3.9" | 3.7" |
|              |   | 80         | 3.7"                               | 3.6" | 3.5" | 3.4" | 3.3" | 3.1"                | 3.0" | 2.9" | 2.8" | 2.7" |
|              |   | 100        | 2.9"                               | 2.9" | 2.8" | 2.7" | 2.6" |                     |      |      |      |      |
|              |   | 120        |                                    |      |      |      |      |                     |      |      |      |      |
|              |   | 140        |                                    |      |      |      |      |                     |      |      |      |      |
|              | 1/4-20 POWERS CALK-IN WITH 7/8" MIN EMBED AND 2-1/4" EDGE DISTANCE (3000psi MIN CONC) | 60         | 5.9"                               | 5.9" | 5.8" | 5.6" | 5.4" | 4.9"                | 4.9" | 4.7" | 4.6" | 4.4" |
|              |   | 80         | 4.4"                               | 4.3" | 4.2" | 4.1" | 3.9" | 3.7"                | 3.6" | 3.5" | 3.3" | 3.2" |
|              |   | 100        | 3.5"                               | 3.4" | 3.3" | 3.2" | 3.0" | 2.9"                | 2.8" | 2.7" | 2.6" | 2.5" |
|              |   | 120        | 2.9"                               | 2.8" | 2.7" | 2.6" | 2.5" |                     |      |      |      |      |
|              |   | 140        | 2.5"                               |      |      |      |      |                     |      |      |      |      |
|              | 1/4-20 POWERS CALK-IN WITH 7/8" MIN EMBED AND 2-1/2" EDGE DISTANCE (3000psi MIN CONC) | 60         | 6.0"                               | 6.0" | 6.0" | 6.0" | 6.0" | 5.6"                | 5.6" | 5.4" | 5.2" | 5.0" |
|              |   | 80         | 5.0"                               | 5.0" | 4.8" | 4.6" | 4.4" | 4.2"                | 4.1" | 3.9" | 3.8" | 3.6" |
|              |   | 100        | 4.0"                               | 3.9" | 3.8" | 3.6" | 3.4" | 3.3"                | 3.2" | 3.1" | 3.0" | 2.8" |
|              |   | 120        | 3.3"                               | 3.2" | 3.1" | 3.0" | 2.8" | 2.8"                | 2.7" | 2.6" |      |      |
|              |   | 140        | 2.8"                               | 2.8" | 2.6" | 2.5" |      |                     |      |      |      |      |
|              | 1/4-20 POWERS CALK-IN WITH 7/8" MIN EMBED AND 3" EDGE DISTANCE (3000psi MIN CONC)     | 60         | 6.0"                               | 6.0" | 6.0" | 6.0" | 6.0" | 6.0"                | 6.0" | 6.0" | 6.0" | 6.0" |
|              |   | 80         | 6.0"                               | 6.0" | 5.9" | 5.7" | 5.4" | 5.2"                | 5.1" | 4.9" | 4.6" | 4.4" |
|              |   | 100        | 5.0"                               | 4.9" | 4.6" | 4.4" | 4.2" | 4.1"                | 4.0" | 3.8" | 3.6" | 3.5" |
|              |   | 120        | 4.1"                               | 4.0" | 3.8" | 3.6" | 3.4" | 3.4"                | 3.3" | 3.2" | 3.0" | 2.8" |
|              |   | 140        | 3.5"                               | 3.4" | 3.2" | 3.1" | 2.9" | 2.9"                | 2.8" | 2.7" | 2.5" |      |

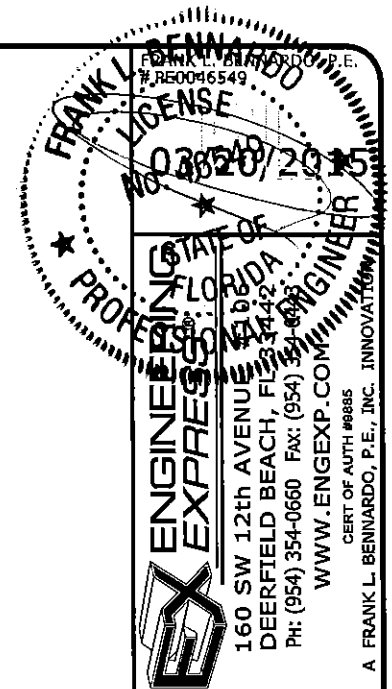
| HOST STRUCT.      | ANCHOR   | LOAD (psf) | 5/8" MIN EDGE DISTANCE |      |      |      |      |                     |      |      |      |      |
|-------------------|--|------------|------------------------|------|------|------|------|---------------------|------|------|------|------|
|                   |  |            | Spans Up To 120"       |      |      |      |      | Spans Up To 143.53" |      |      |      |      |
|                   |  |            | CONN TYPE              |      |      |      |      | CONN TYPE           |      |      |      |      |
|                   |  |            | C1                     | C2   | C3   | C4   | C5   | C1                  | C2   | C3   | C4   | C5   |
| ALUMINUM OR STEEL | #14 410 STAINLESS STEEL SMS OR SDS TO 1/8" MIN. 6063-T5 ALUMINUM OR A36 STEEL, FULL THREAD PENETRATION | 60         | 6.0"                   | 5.1" | 4.9" | 4.6" | 4.3" | 5.1"                | 4.2" | 4.0" | 3.7" | 3.5" |
|                   |  | 80         | 4.6"                   | 3.7" | 3.5" | 3.3" | 3.0" | 3.8"                | 3.0" | 2.8" | 2.6" | 2.4" |
|                   |  | 100        | 3.6"                   | 2.9" | 2.7" | 2.5" | 2.3" | 3.0"                | 2.4" | 2.2" | 2.0" | 1.9" |
|                   |  | 120        | 3.0"                   | 2.4" | 2.2" | 2.0" | 1.9" | 2.5"                | 2.0" | 1.8" | 1.7" | 1.5" |
|                   |  | 140        | 2.5"                   | 2.0" | 1.9" | 1.7" | 1.6" | 2.1"                | 1.7" | 1.5" | 1.4" | 1.3" |

| HOST STRUCT.      | ANCHOR   | LOAD (psf) | 3/4" MIN EDGE DISTANCE |      |      |      |      |                     |      |      |      |      |
|-------------------|--|------------|------------------------|------|------|------|------|---------------------|------|------|------|------|
|                   |  |            | Spans Up To 120"       |      |      |      |      | Spans Up To 143.53" |      |      |      |      |
|                   |  |            | CONN TYPE              |      |      |      |      | CONN TYPE           |      |      |      |      |
|                   |  |            | C1                     | C2   | C3   | C4   | C5   | C1                  | C2   | C3   | C4   | C5   |
| WOOD (G=0.55 MIN) | #14 410 STAINLESS STEEL SMS TO G=0.55 MIN WOOD W/ 1-1/2" MIN. THREAD PENETRATION | 60         | 4.8"                   | 4.8" | 4.7" | 4.6" | 4.5" | 4.0"                | 4.0" | 3.9" | 3.8" | 3.7" |
|                   |  | 80         | 3.6"                   | 3.5" | 3.5" | 3.4" | 3.3" | 3.0"                | 2.9" | 2.9" | 2.8" | 2.7" |
|                   |  | 100        | 2.8"                   | 2.8" | 2.7" | 2.7" | 2.6" | 2.4"                | 2.3" | 2.3" | 2.2" | 2.1" |
|                   |  | 120        | 2.4"                   | 2.3" | 2.3" | 2.2" | 2.1" | 2.0"                | 1.9" | 1.9" | 1.8" | 1.8" |
|                   |  | 140        | 2.0"                   | 2.0" | 1.9" | 1.9" | 1.8" | 1.7"                | 1.7" | 1.6" | 1.6" | 1.5" |

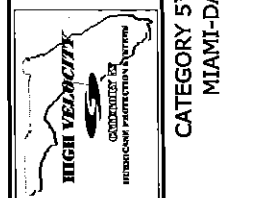
## ANCHOR NOTES:

- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- EDGE DISTANCE OF 5/8" IS ACCEPTABLE FOR ANCHORS TO STEEL OR ALUMINUM.
- WHERE ANCHORS FASTEN TO NARROW FACE OF STUD FRAMING, ANCHOR SHALL BE LOCATED IN CENTER OF NOMINAL 2x (MIN) WOOD STUD (i.e. 3/4" EDGE DISTANCE IS ACCEPTABLE FOR ANCHORS TO WOOD FRAMING).
- WOOD HOST STRUCTURE SHALL BE "SOUTHERN PINE" G=0.55 OR GREATER DENSITY.
- MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
- ANCHOR SCHEDULE APPLIES TO ALL PRODUCTS CERTIFIED HEREIN, BUT ONLY PROVIDES MAXIMUM ALLOWABLE ANCHOR SPACING. MAXIMUM ALLOWABLE SPANS AND PRESSURES INDICATED OTHERWISE SHALL APPLY.
- WHERE EXISTING STRUCTURE IS WOOD FRAMING, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT INTO PLYWOOD.
- WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.
- MACHINE SCREWS SHALL HAVE MINIMUM OF 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR AND MAY HAVE EITHER A PAN HEAD, TRUSS HEAD, OR WAFER HEAD ("SIDEWALK BOLT") U.N.O.
- MACHINE SCREWS SHALL BE INSTALLED WITH FULL ENGAGEMENT OF THREADS INTO METAL HOST STRUCTURE AND MAY HAVE EITHER A FLAT HEAD, PAN HEAD, TRUSS HEAD, OR OTHER HEAD STYLES.
- DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE FOR USE.

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 15-0323.03  
Expiration Date 04/14/2016  
By *Heidi A. Miller*  
Miami Dade Product Control



**HIGH VELOCITY**  
HURRICANE PROTECTION SYSTEMS  
3827 PROGRESS AVENUE  
NAPLES, FL 34104  
CATEGORY 5<sup>TH</sup> ACCORDION SHUTTER SYSTEM  
MIAMI-DADE NOTICE OF ACCEPTANCE



| REMARKS                   | DRWN | CHKD | DATE     |
|---------------------------|------|------|----------|
| INT ISSUE                 | KL   | FLB  | 02/26/10 |
| REV PER BOCO COMMENT      | KL   | FLB  | 04/30/10 |
| 2010 FBC (10-HVH-0001_02) | KL   | FLB  | 01/15/12 |
| FBC 5TH EDITION           | CSL  | TSB  | 03/17/15 |

14-2100

SCALE:  
PAGE DESCRIPTION:

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